

This thesis deals with selecting the optimal portfolio for a risk averse investor. Firstly, we present the risk measures, specifically spectral risk measures which consider an individual risk aversion of the investor. Then we propose a diversification-consistent data envelopment analysis model. The model is searching for an efficient portfolio with respect to second-order stochastic dominance. The crux of the thesis is a model based on the theory of multi-criteria optimization and spectral risk measures. The presented model is searching for an optimal portfolio suitable for the investor with a given risk aversion. In addition, the optimal portfolio is also consistent with second-order stochastic dominance efficiency. The topic of the practical part is a numerical study in which both models are implemented in `MATLAB`. Models are applied to a dataset from real financial markets. Personal contribution lies in comparing the diversification-consistent data envelopment analysis model and model based on multi-criteria optimization, both with respect to second order stochastic dominance efficiency.